

10/695,995

2

DOCKET NO. K06-163512M/TBS

AMENDMENTS TO THE CLAIMS:

Claim 1. (Previously presented - allowed) An electric power steering device comprising:

- a motor for generating a steering assisting force;
- means for obtaining steering torque;
- means for obtaining a rotation angular speed of said motor;
- means for obtaining a steering angular acceleration correspondence value, which corresponds to a sum of a value obtained by multiplying a change acceleration of the steering torque by a gain and a rotation angular acceleration of said motor, according to the obtained steering torque and the obtained rotation angular speed of said motor;
- means for regulating the gain;
- means for storing a relation between a motor output correction value, which is preliminarily determined in such a way as to compensate for the influence of the inertia on steering, and the steering angular acceleration correspondence value; and
- means for controlling said motor in such a way as to correct the steering assisting force according to the motor output correction value obtained according to the obtained steering angular acceleration correspondence value and the stored relation.

Claim 2. (Currently amended) The electric power steering device according to claim 1,

wherein said means for controlling sets a rate of increase in magnitude of the motor output correction value in a range, in which a magnitude of the steering angular acceleration correspondence value is large, to be larger than the a rate of increase in magnitude of the motor output correction value in the range, in which the magnitude of the steering angular

10/695,995

3

DOCKET NO. K06-163512M/TBS

acceleration correspondence value is small.

Claim 3. (Previously presented - allowed) A method for controlling an electric power steering device, said method comprising:

obtaining steering torque;

obtaining a rotation angular speed of a motor for generating a steering assisting force;

obtaining a steering angular acceleration correspondence value, which corresponds to a sum of a value obtained by multiplying a change acceleration of the steering torque by a gain and a rotation angular acceleration of said motor, according to the obtained steering torque and the obtained rotation angular speed of said motor;

regulating the gain;

storing a relation between a motor output correction value, which is preliminarily determined in such a way as to compensate for the influence of the inertia on steering, and the steering angular acceleration correspondence value; and

controlling said motor in such a way as to correct the steering assisting force according to the motor output correction value obtained according to the obtained steering angular acceleration correspondence value and the stored relation.

Claim 4. (Currently amended) An electric power steering device, comprising:

a motor for generating a steering assisting force; and

means for obtaining a steering angular acceleration correspondence value, which corresponds to a value that is obtained by adding a rotation angular acceleration of said motor with a product of a change acceleration of a steering torque and a gain, according to the

10/695,995

4

DOCKET NO. K06-163512M/TBS

obtained steering torque and rotation angular speed of the motor; and

means for regulating the gain.

Claim 5. (Currently amended) The electric power steering device according to claim 4, wherein said means for regulating the gain comprises ~~further comprising:~~

means for controlling said motor such that a rate of increase is set higher in a magnitude of ~~a the~~ motor output correction value when a magnitude of the steering angular acceleration correspondence value is in a first range, than when a magnitude of the steering angular acceleration correspondence value is in a second range.

Claim 6. (Previously presented) The electric power steering device according to claim 5, wherein the first range has a higher value than the second range.

Claim 7. (Currently amended) A method for controlling an electric power steering device, said method comprising:

generating, by a motor, a steering assisting force; ~~and~~

obtaining a steering angular acceleration correspondence value, which corresponds to a value that is obtained by adding a rotation angular acceleration of said motor with a product of a change acceleration of a steering torque and a gain, according to the obtained steering torque and rotation angular speed of the motor; and

regulating the gain.

Claim 8. (Currently amended) The method according to claim 7, wherein said

10/695,995

5

DOCKET NO. K06-163512M/TBS

regulating the gain comprises ~~further comprising:~~

controlling said motor such that a rate of increase is set higher in a magnitude of a ~~the~~ motor output correction value when a magnitude of the steering angular acceleration correspondence value is in a first range, than when a magnitude of the steering angular acceleration correspondence value is in a second range.

Claim 9. (Previously presented) The method according to claim 8, wherein the first range has a higher value than the second range.